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2100 Pennsylvania Avenue N W
Washington, DC 20037-3202

EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/674,039

Applicant(s)

HIMURO, YASUO

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-28 and 30-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-28 and 30-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9-26-03 has been entered.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claim 33 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 33 and 34, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of the first groove wall extending in a generally circumferential direction and the pseudo land portion extending in a direction generally orthogonal to the circumferential direction. The original disclosure fails to provide guidance as to extending both the first groove wall and the pseudo land portion in "generally the circumferential direction" and "in a direction generally orthogonal to the circumferential direction" respectively. Applicant has not indicated where support for this language is located. It is suggested to delete claims 33 and 34.

4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 5) Claims 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 33 and 34, the scope of meaning of "generally circumferential direction" and "in a direction generally orthogonal to the circumferential direction" is unclear; it being noted that the original disclosure fails to describe or define these phrases. It is suggested to delete claims 33 and 34.

As to claims 37 and 38, there is no antecedent basis for "said pseudo-land portions".

- 6) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

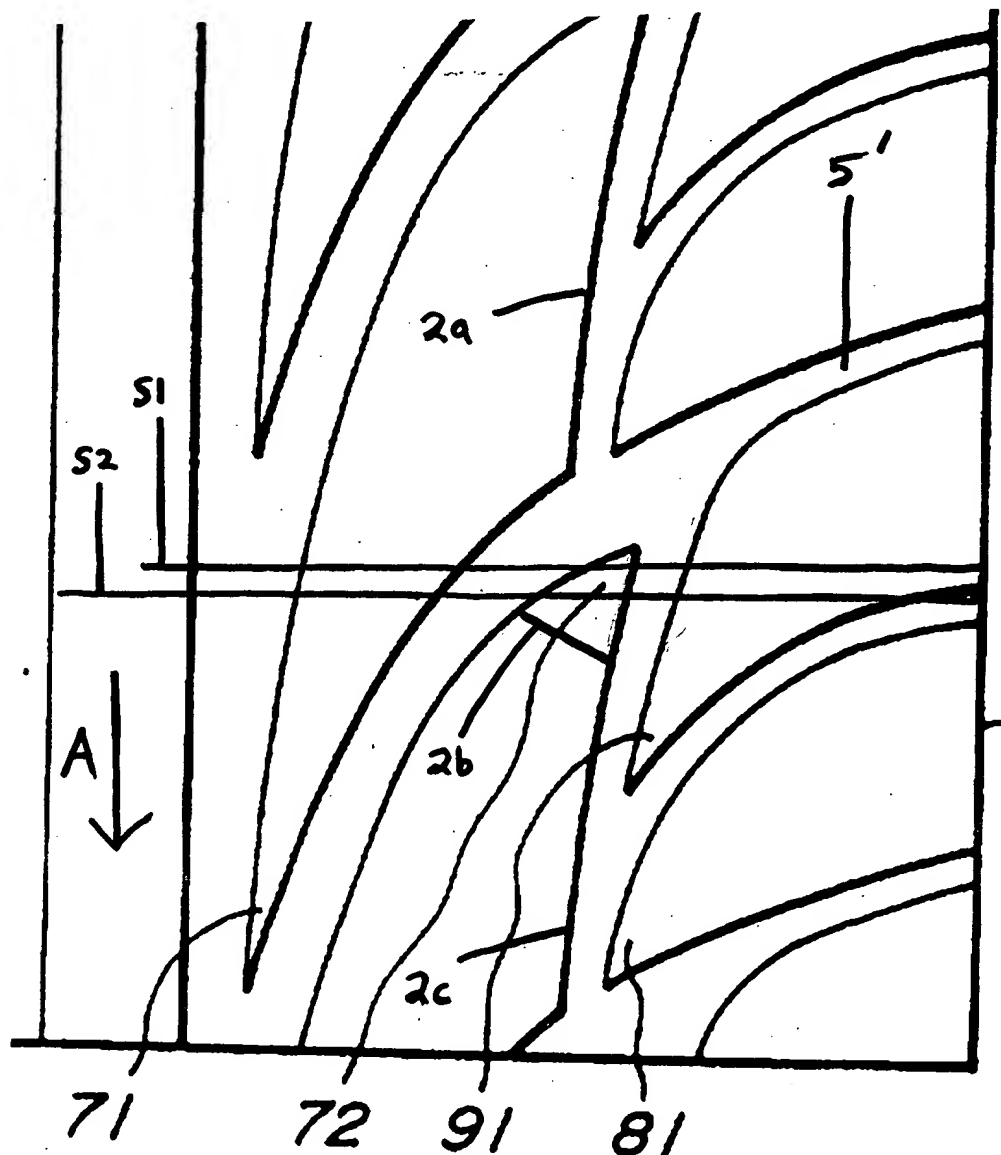
- 7) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Europe '310

- 8) Claims 2-5, 7, 8, 14, 16-18, 20-22, 24-26, 28 and 30-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Europe '310 (EP 867310).

The claimed tire is anticipated by Europe '310. The claimed pseudo land portion reads on the acute angle corner portion 72 of the block, which is beveled over a distance of 10-30 mm from a tapered end thereof in a longitudinal direction so as to gradually shallow from the tapered end toward a width widened portion. Europe '310 teaches that the beveling obtains *smooth conduction of branching and joining of water flow*. In order to facilitate understanding of the application of Europe '310 against the claims, the following copy of an enlargement of a portion of figure 1 of Europe '310 is provided:



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The markings for S1, S2, 5', 2a, 2b and 2c and A were added by the examiner.

Markings S1, S2 and 2b are not to scale.

As to the pseudo-land portion comprising "a slant face on a ground contact side so that the slant face does not contact a ground surface" (claims 3, 31), Europe '310 satisfies this subject matter since the upper surface of the beveled corner 72 is below the ground contacting surface of the tread.

As to "a pseudo-land portion formed in the circumferential groove", the beveled portion 72 is located "in a circumferential groove" as indicated by figure 1 wherein the outer upper edge of "the circumferential groove" is defined by one outer upper block edge (2a), the edge (2b) at which the beveled portion joins the ground contacting surface of a block and the outer upper edge (2c) of a next block. The phrase "circumferential groove" is sufficiently broad so as to read on the above non-linear outer edge (2a, 2b, 2c); it being noted that edge (2b) directly corresponds to the edge at maximum height 35 shown in figure 2a of applicant's disclosure.

As to "said opening position of said slant groove is located on a side of the circumferential groove opposite to said pseudo-land portion formed on another side of said circumferential groove" (claim 3) and "the pseudo-land portion is arranged adjacent to a first groove wall of the circumferential groove not opened to the slant groove" (claim 31), beveled corner 72 is adjacent the above noted outer edge (2a, 2b, 2c) on one side of the circumferential groove and opposite the other side of the circumferential groove opened to slant groove 5'.

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As to "an end part at a larger side of the cross sectional area of the pseudo-land portion", the following comments are made: The cross sectional area at line (S2) of the beveled corner 72 near the ground contacting surface is larger than the cross sectional area at line (S1) near the apex of the beveled corner 72. The claimed end part reads on the portion extending between edge 2b and cross sectional area at line (S2). This end part is "close" to the opening of the slant groove since the beveled corner faces the slant groove 5' and is closer, for example, to slant groove 5' than the center circumferential rib; it being emphasized that "close" is a relative term.

Claims 3 and 31 fail to require a straight upper groove edge and thereby read on a non-linear groove edge as in Europe '310.

Claims 3 and 31 fail to require the end part having the larger cross sectional area to be closer to the slant groove than a portion of the pseudo land portion having a smaller cross sectional area.

As claims 2 and 32, the cross sectional area of the beveled corner increases in a given circumferential direction (circumferential direction A).

As to claims 4, 5 and 31, the first groove wall reads on the outer groove wall having edges defined by the outer upper block edges and the upper edge of the beveled corner (edges 2a, 2b, 2c).

As to claims 7 and 8, the height of beveled corner 72 decreases toward slant groove 5'.

As to claims 14, 16-18, note the sides of the beveled corner 72.

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As to claims 20-22, note the continuous center rib and circumferential grooves 1 in figure 1.

As to claims 24-26, the claimed corner reads on beveled corner 91.

As to claim 28, beveled corner 91 and beveled corner 72 are connected by the groove bottom of the circumferential groove.

As to claim 30, the tread pattern of Europe '310 is directional.

As to claims 33 and 34, these claims fail to require groove wall and pseudo land portion orientation different from that shown by Europe '310.

As to claims 35 and 36, note blocks 7.

9) **Claims 6, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '310 (EP 867310) in view of Japan '103 (JP 11-263103).**

As to claims 6, 37 and 38, it would have been obvious to separate the block from the beveled corner 72 for branching and joining water smoothly and (b) Japan '103 suggests separating a block from a beveled corner for draining water efficiently via slot 20.

10) **Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '310 (EP 867310) in view of Miyazaki (US 6138728).**

The limitation of claim 19 would have been obvious in view of Europe '310's teaching to bevel and Miyazaki's teaching to bevel in stages (the line (basic side) between the triangular face 9B and the trapezoidal face 9A being below the tread surface.

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11) Claims 9-13, 15 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '310 (EP 867310) in view of Japan '025 (JP 5-319025).

As to claims 9-12 and 27, it would have been obvious to use a curved or flat form as claimed for the beveled portion (chamfer) since Japan '025, which like Europe '310 discloses a directional tread having chamfered acute angle corners of blocks teaches using different shapes for the chamfer such as a curved shape as shown in figure 2 or a flat shape as shown in figure 3. As to claims 13 and 15, it would have been obvious to provide the beveled portion (chamfered portion) of Europe '310 with the claimed triangular shape since Japan '025 clearly shows chamfering such that the chamfer defines a triangular portion (note shaped regions in figure 1).

12) Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '310 (EP 867310) in view of Verdier (US 3682220).

As to claim 23, it would have been obvious to incline the sidewalls of the circumferential grooves defining the center rib at the claimed angle since it is well known / conventional per se to incline the sidewalls of a circumferential groove at an angle such as 30 degrees with respect to the radial direction / normal to tread surface in order to improve drainage as evidenced for example by Verdier.

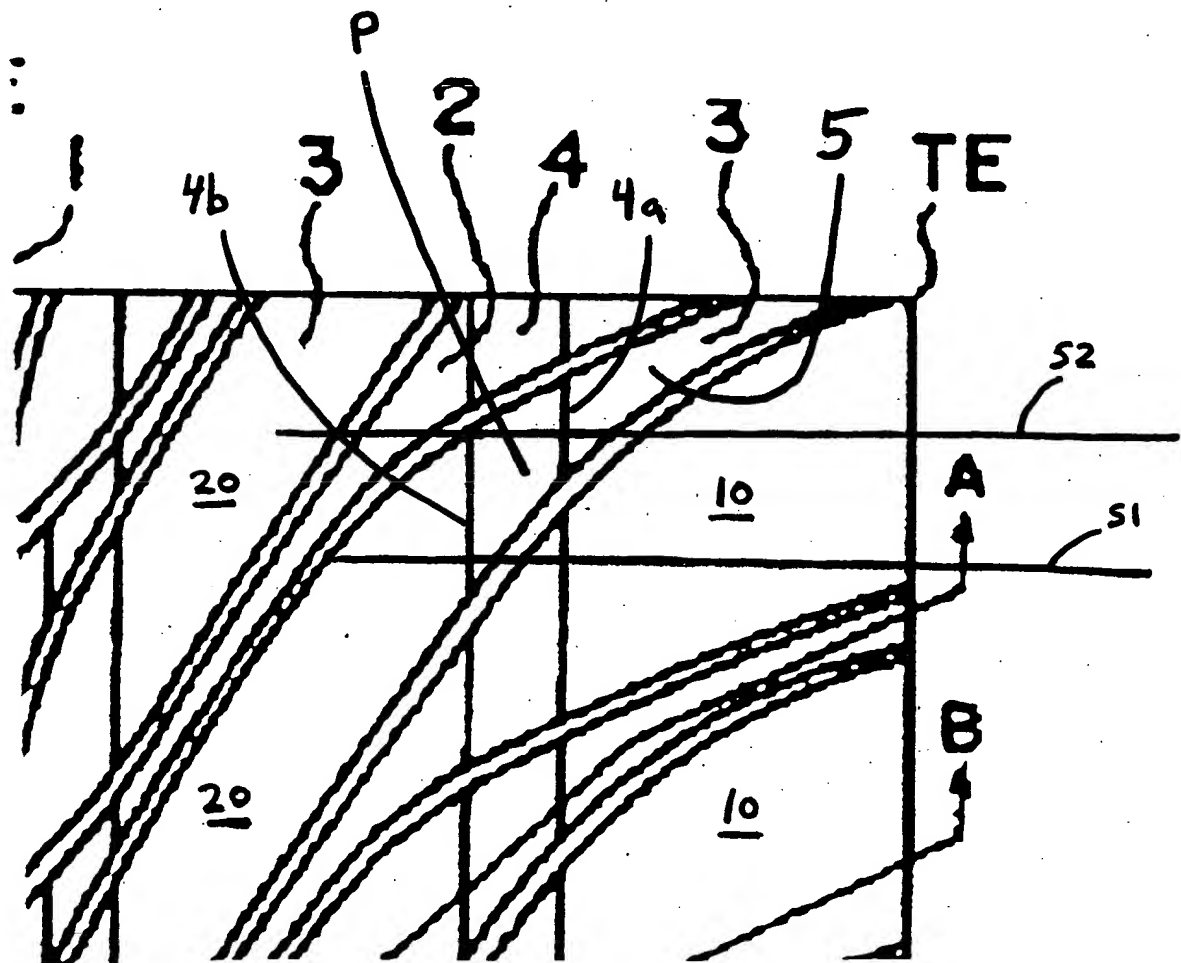
Japan '024

13) Claims 2-5, 7, 8, 10, 12-14, 16-18, 20-27 and 30-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan '024 (JP 9-2024).

The claimed tire is anticipated by the tire of Japan '024. The claimed pseudo land portion reads on the projections on the outer end of the inner row of land portions

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which have decreasing height toward a slant groove. The claimed circumferential groove reads on the circumferential void defined between the inner row of land portions and the outer row of land portions. See figures 1-3. The decreasing height of the projections of the rib towards the slant groove 4 inherently promotes water flow as claimed. An enlarged copy of a portion of figure 1 of Japan '024 is provided below:



The markings P, 4a, 4b, 5, 10, 20, S1 and S2 were added by the examiner. 4a and 4b are the upper edges of the "circumferential groove" 4. P is the pseudo land portion. 5

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is the slant groove. 10 are the land portions of the outer row. 20 are the land portions of the inner row. S1 and S2 are lines indicating different cross sectional area locations.

As to the "pseudo-land portion comprising "a slant face on a ground contact side so that the slant face does not contact a ground surface" (claims 1, 31), Japan '024 satisfies this subject matter since the upper surface of the pseudo land portion P (inclined end portion of inner land portion 20) is below the tread surface.

As to "a pseudo-land portion formed in the circumferential groove", the pseudo land portion P (end portion of inner land portion 20) is in the circumferential groove 4 since it is located within the boundaries of the upper edges 4a, 4b of the circumferential groove.

As to "said opening position of said slant groove is located on a side of the circumferential groove opposite to said pseudo-land portion formed on another side of said circumferential groove" (claim 3) and "the pseudo-land portion is arranged adjacent to a first groove wall of the circumferential groove not opened to the slant groove" (claim 31), the pseudo land portion P (end portion of inner land portion 20) is adjacent the above upper edge 4b on one side of the circumferential groove and opposite the other side of the circumferential groove opened to slant groove 5.

As to "an end part at a larger side of the cross sectional area of the pseudo-land portion", the following comments are made. The cross sectional area at line (S2) of the pseudo land portion P (end portion of inner land portion 20) is larger than the cross sectional area at line S1. The claimed end part reads on a portion defined between the edge of the pseudo land portion and the line at S2. This end part is "close" to the

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opening of the slant groove since it faces the slant groove 5 and is closer, for example, to slant groove 5 than the center circumferential rib; it being emphasized that "close" is a relative term.

Claims 3 and 31 fail to exclude a pseudo land portion having parallel circumferential edges.

Japan '609

14) **Claims 2-5, 7, 8, 10, 12-18, 20-25, 28 and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '609 (JP 6-270609) in view of Japan '204 (JP 6-270609).**

Japan '609 discloses a pneumatic tire having a directional tread pattern comprising a "non-linear circumferential groove" separating a rib and a row of lugs separated by lug grooves. The rib has triangular shaped protrusions. Japan '609 does not recite providing each protrusion of rib with a slant surface. However, it would have been obvious to one of ordinary skill in the art to provide the protrusions of Japan '609's rib such that it has a slant surface and end part as claimed since Japan '204 suggests changing the height of the protrusions of a rib so as to decrease toward a slant groove to improve drainage. See for example paragraph 12 of machine translation. The limitation of "an end part at a larger side of the cross sectional area of the pseudo-land portion" naturally flows from the application of the decreasing height as suggested by Japan '024 to the triangular protrusions of Japan '609. As to claims 35 and 36, the tread of Japan '609 includes lugs (blocks) arranged as claimed. See figure 1.

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Allowable Subject Matter

15) **Although all of the claims have been rejected using prior art, the examiner agrees that this application contains allowable subject matter. In particular, claims 3, 31, 32, 37 and 38 and appropriate dependent claims would be allowable if amended to include the subject matter shown in figures 1, 7, 8, 11 or 12 of the end part of the pseudo land portion "not overlapping" the land portions separated by the slant grooves in the axial direction (e.g. the end part of the pseudo land portion being spaced from land portions separated by the slant grooves so as to define a straight shaped groove portion 27)**

The prior art of record, including Japan '609, Japan '024, Europe '310 and Brown et al, fails to disclose teach or suggest further modifying Japan '609 such that the modified ribs 6 do not overlap the lugs 7. In particular, there is no suggestion to apply Brown et al's teachings of forming a circumferentially continuous window to the specific tread pattern of Japan '609 so as to widen the spacing between the ribs and lugs so as to satisfy the above noted allowable subject matter.

Remarks

16) The 112 second paragraph rejection regarding the scope and meaning of "pseudo-land portion" has been withdrawn because each of the independent claims in the amendment filed 9-26-03 clarifies the meaning of "pseudo-land portion" by describing "said pseudo-land portion comprises a slant face on a ground contact side so that said slant face does not contact a ground surface".

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The 112 second paragraph rejection of claim 31 has been withdrawn since it is clear that "a first groove wall of the circumferential groove not opened to the slant groove" merely means a groove wall other than a groove wall opened to the slant groove.

In the amendment filed 9-26-03, applicant added "an end part at a larger side of the cross sectional area of the pseudo-land portion". This language is interpreted using the following special definition in the original disclosure: "The term 'cross sectional area of the pseudo-land portion' used herein means a cross sectional area S when the pseudo-land portion is cut off at a plane including a widthwise direction 25 of the tire as shown in Fig. 2a". See original specification page 9.

The rejection using Japan 3-86605 has been withdrawn since the fin 4 in Japan '605 has a constant cross section instead of "an end part at a larger side of the cross sectional area of the pseudo-land portion".

The rejection using WO 95/18022 has been withdrawn since the peaks of the wavy surface fail to define "an end part at a larger side of the cross sectional area of the pseudo-land portion".

The rejection using US 6112788 has been withdrawn since the circumferential ribs 10 fail to define "an end part at a larger side of the cross sectional area of the pseudo-land portion".

The rejection using US 5658404 has been withdrawn since the protrusion having the triangular face has its largest cross sectional area at the middle (instead of an end

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part) and thereby fails to define "an end part at a larger side of the cross sectional area of the pseudo-land portion".

Applicant's arguments filed 9-26-03 have been fully considered but they are not persuasive.

Applicant comments that "The Examiner's analysis of FIG. 2a is incorrect. In this exemplary embodiment, the "groove" is defined by the side groove wall 8a, and the pseudo-land portion is clearly shown 'in' the 'groove'". Applicant is incorrect as to the slant surface 12 not defining the groove wall for the simple reason that groove wall 8a does not exist in the cross section of figure 2 (note that dotted lines instead of solid lines are used to indicate groove wall 8a). However, the examiner agrees that applicant's pseudo land portion is in a circumferential groove because it is within the boundaries of the upper groove edges of the circumferential groove.


17) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068 until Dec. 18, 2003 and (571) 272-1221 after Dec. 18, 2003. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
December 13, 2003


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AV 1733
12-13-03